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Patent application 09/892,351
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To the Commissioner for Patents,
I will respond to the correspondence of 31 July 07 referring to your numbering.
To assist the examiner, visual examples of the claimed invention and of the prior art in discussion can be seen at www.acb3d.com/exam.html with the anaglyph viewer supplied. Use a color accurate monitor, preferably a glass screen. Assessment should be by one who is not color blind.

1. Claim 1 is amended to include a citation from (0009) of the application as preferred by the examiner. "...enable an anaglyphic perception of broad spectrum contrast balance..."

You refer to 6,037,971 column 3 lines 20-25 and column 4 lines 30-38 as involving color adjusting/correcting.
However, these refer to the process of 6,037,971 Fig' 6 where a red left/Green-blue right (R/GB) anaglyph, made as per Fig 2, is monitored for underexposure and overexposure of red and a green image plane is substituted for a red one.
6,037,971 Fig' 2 results in an R/GB anaglyph image video. See Col' 5 lines 29-31 and Col 6 lines 48-50.
6,037,971 Fig' 6 operates on the anaglyph image of Fig 2. See Col' 7 lines 55-58.

Please note that:
a. 6,037,971 does not adjust the color of the left and right images of the stereo pair.
b. The image plane substitution does not result in anaglyphic contrast balance. It results in a one third spectrum green contrast opposed by two thirds green –blue contrasts.
   My method enables the contrasts from the full spectrum to both views.
c. The operation of 6,037,971 Fig'6 is applied to an R/GB anaglyph and not to the stereo pair.

6,037,971 Fig' 5 also operates on the anaglyph image of Fig 2. See Col' 7 lines 39-41.
See text for Fig 5 column 7 lines 39-48 where the output of Fig 2 (an R/GB anaglyph) is modified by adjusting its color. "The net result is to eliminate pure red or pure blue pixels..."
See my reply of 11 May 07 item 8-9 page 2-3. The pixel sampling of the anaglyph in 6,037,971 Figs 5 and 6 are indiscriminate of fringe areas in anaglyph images that require pure color to represent the relative horizontal displacement between the left and right views.
  Fringe areas are evidence of the color channels and are typically pure in color and thus are most likely to be altered by the claimed method of Fig 5.
They are visible without anaglyph glasses but should not be visible with anaglyph glasses. Altering the color purity of an anaglyph image, as per fig 5, results in double imaging as pure colour is required for color channels to separate the two views.
6,037,971 refers to color planes or image planes. My application refers to them as color channels that are preserved as pure.
See my application (0203) where additional treatments to an anaglyph "...do not effect the color balance."

Please note from the above that:
a. The claimed method of 6,037,971 Fig'5 is applied to an R/GB anaglyph and not to the stereo pair.
b. The Fig' 5 elimination of an anaglyphs pure color is at the expense of double imaging.
c. 6,037,971 does not adjust the color of the left and right images of the stereo pair as does my application where also the purity of the color channels is maintained.

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2. I have cancelled claims 61-79 and 81-85. My 26 Dec' 06 response to the election requirement was to make all the claims dependant.
Please find dependant claims 59 and 60 also generic with claims 53-58, 80 and 86.
Enclosed is a claim listing with status identifiers.
Should the status identifiers not be correct, could an examiner's amendment be made if required.

3. Filter value amendments have been prior accepted, before allowance 13 September 05.
In the original specification (0117) line 6, (0168) line 1 and (0182) line 1, refer to the filter values as 'an example of..'
The subsequent amended filter values are not new matter. They offer a better example for the same process disclosed.
The amended filter values provide clear, concise and exact terms to enable use of the invention as per 35 USC 112. Please accept the amended filter values of 22 May 07.

To avoid further objection, could an examiner's amendment be made if required to amend the filter values to as were originally filed, as is enclosed.

5. The term 'to be re-established' has been removed from claim 1.

For claim 86, the application of selective color treatment with color channel allocation to each image of the image pair in a single sweep, is found in (0183) of the specification.
'..filters...pre-set to render all adjustments with a single sweep for each of the pair...'
See also (0136) (0188) (0196) (1123)

7. Regarding claim 53. 'from within color channel allocations' means;
As prior explained in 4-7 of my reply of 11 May 07, see specification as filed, (0138) (0139) page 42.
"Color washing...the image to be viewed through red gel (allocating)...contrasts within a...red channel"
My invention enables balanced contrasts to be viewed from within the color channels of an anaglyph image.
To avoid further objection, "from within color channel allocations," has been removed from claim 1.

Regarding claim 58, anaglyph 'images' produced by the method claimed in claim 1.
As these images exhibit balanced contrasts from the full spectrum, see (0031) and (0195), they embody a useful improvement of composition of matter as per 35 U.S.C 101.
'Whoever invents...any new and useful process... or composition of matter or any...improvement thereof, may obtain a patent therefore...'
Claim 58 has been amended to read: 'Anaglyphic image produced as claimed in claim 53.'

Regarding claim 86, See my specification (0138-9) concerning the allocation of color channels to each image of the stereo pair to enable their mutual extinction.
Such allocation can be summed with prior treatments. See (0183)
claim 86 claims that the selective color treatment and color channel allocation can be integrated as a single step for the left image and a single step for the right image.
Claim 86 is amended to recite amended claim 53.

9b. page 6.
McLaine does not adjust color records of the stereo pair. McLaine adjusts color planes of an anaglyph made as shown in 6,037,971 Fig 2. See Col' 7 lines 39-41 and Col' 7 lines 55-58. The abstract lines 3-5, col' 3 lines 20-25 and col' 4 lines 30-38 all refer to the substitution of a green image plane, as per Fig 6, when red is under' or overexposed.

As prior pointed out, an anaglyphic contrast balance is not achieved by this. The elimination of an anaglyphs pure color as per Fig' 5 is at the expense of double imaging. For visual examples of this see www.acb3d.com/exam.html

9. Concerning claim 54.
You refer to Col' 7, line 54-col' 8, line 16 of 6,037,971. This refers to brightening a green color plane that replaces the red one.
The 'optimising' of my claim 54 refers to the optimising process of (0192) line 5 and to any post production treatment for anaglyphs such as (0203) "Additional treatments...that do not effect the color balance."

Concerning claim 55.
You refer to Col' 8 lines 4-17. This refers to Fig' 6, monitoring the red image plane of an R/GB anaglyph for replacement with a brightened green one.
No selective color treatment is applied to the left and right images of the stereo pair.

Col' 4 lines 19-23 of 6,037,971 reports anaglyph images as 'perceived more acceptably'. However, they are not contrast balanced.

Concerning claim 86.
The frame grabber of col' 3, lines 39-44 selects still frames from left and right cameras to produce red left / green-blue right R/GB anaglyph as per Col' 3, lines 37-39.
It is not connected with selective adjustment of color within the color left and right images of a stereo pair. Nor has it anything to do with such color adjustment being summed with color channel allocation for a single application to each image.

11. To further clarify, Col' 4, lines 14-23 refers to Fig' 5 that produces a Red left / Green-Blue right anaglyph from video cameras by replacing the right red image plane with the left red one. A moving anaglyph video picture means the pixels are changing. Each pixel is monitored and adjusted if found too pure. This results in double imaging.
The color records within the pair of images that are to make the anaglyph are not addressed.

Col' 8 lines 4-17 refer to Fig' 6 and detail the condition for substituting a brightened image plane of an anaglyph.
This results in an imbalance of: bright Green contrasts / Green-Blue contrasts.
My method enables the contrasts from the full spectrum to both views.

The Luminosity Compression of my application (0128-0129) involves reducing brightness and contrast of the (images of a stereo pair) to assist the allocation of white areas within a color channel. See (0128) lines 3-6.
It could be called brightness reduction instead.
It is not connected with Swifts data compression of left and right images for digital storage where compression techniques, like JPEG, reduce the color gamut of an anaglyph and cause anaglyph ghosting.

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12. Concerning claim 56.

See specification as filed (0121) and (0122) where a selective reduction of black, present in the left and right images of the stereo pair, contrarily darkens the resulting anaglyph.

An increase in black contrarily brightens the anaglyph.

This description of predictive control of the anaglyphs brightness from (0118), (0121) and (0122) is clear and concise and is claimed in claim 56.

M. Dawson.